

Species Listing PROPOSAL Form:
Listing Endangered, Threatened, and Special Concern Species in Massachusetts

Scientific name: *Potamogeton diversifolius* Current Listed Status (if any): **Endangered**

Common name: **Variable Leaved Pondweed**

Proposed Action:

 Add the species, with the status of :

X Remove the species

 Change the species' status to:

Change the scientific name to:

Change the common name to:

(Please justify proposed name change.)

Proponent's Name and Address:

Melissa Dow Cullina, Botanist
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
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Fax:

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Association, Institution or Business represented by proponent: **NHESP**

Proponent's Signature:

Date Submitted: **January 3, 2008**

Please submit to: Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, 1 Rabbit Hill Road, Westborough, MA 01581

Justification

Justify the proposed change in legal status of the species by addressing each of the criteria below, as listed in the Massachusetts Endangered Species Act (MGL c. 131A) and its implementing regulations (321 CMR 10.00), and provide literature citations or other documentation wherever possible. Expand onto additional pages as needed but make sure you address all of the questions below. The burden of proof is on the proponent for a listing, delisting, or status change.

(1) **Taxonomic status.** Is the species a valid taxonomic entity? Please cite scientific literature.

***Potamogeton diversifolius* Raf. is a valid taxonomic entity. It was first described in Med. Rep. (II) 5: 354 in the year 1808 (Britton and Brown, 1898 and International Plant Names Index, 2008).**

(2) **Recentness of records.** How recently has the species been conclusively documented within Massachusetts?

Potamogeton diversifolius* was thought to have been confirmed in Massachusetts based on a 2002 collection by Dr. Matthew Hickler at Rohuntha Lake in Orange. However, additional material was collected there in 2006 by Dr. Barre Hellquist and visiting colleague Dr. Zdenek Kaplan. Dr. Kaplan undertook a molecular analysis of the specimens and determined that the plants were not, in fact, *P. diversifolius*, but rather a hybrid of the common *P. epihydrus* and *P.

bicupulatus (Personal communication to Cullina 13 December 2006). Since *P. diversifolius* is not now known to be present in Massachusetts, it must be removed from the MESA list.

- (3) **Native species status.** Is the species indigenous to Massachusetts?
- (4) **Habitat in Massachusetts.** Is a population of the species supported by habitat within the state of Massachusetts?
- (5) **Federal Endangered Species Act status.** Is the species listed under the federal Endangered Species Act? If so, what is its federal status (Endangered or Threatened)?
- (6) **Rarity and geographic distribution.**
- (a) Does the species have a small number of occurrences (populations) and/or small size of populations in the state? Are there potentially undocumented occurrences in the state, and if so, is it possible to estimate the potential number of undocumented occurrences?
 - (b) What is the extent of the species' entire geographic range, and where within this range are Massachusetts populations (center or edge of range, or peripherally isolated)? Is the species a state or regional endemic?
- (7) **Trends.**
- (c) Is the species decreasing (or increasing) in state distribution, number of occurrences, and/or population size? What is the reproductive status of populations? Is reproductive capacity naturally low? Has any long-term trend in these factors been documented?
- (8) **Threats and vulnerability.**
- (d) What factors are driving a decreasing trend, or threatening reproductive status in the state? Please identify and describe any of the following threats, if present: habitat loss or degradation; predators, parasites, or competitors; species-targeted taking of individual organisms or disruption of breeding activity.
 - (e) Does the species have highly specialized habitat, resource needs, or other ecological requirements? Is dispersal ability poor?

Conservation goals.

What specific conservation goals should be met in order to change the conservation status or to remove the species from the state list? Please address goals for any or all of the following:

- (a) State distribution, number of occurrences (populations), population levels, and/or reproductive rates

(b) Amount of protected habitat and/or number of protected occurrences

(c) Management of protected habitat and/or occurrences

Literature cited, additional documentation, and comment

Kaplan, Z. 2006. Personal communication. Correspondence to Melissa Dow Cullina of NHESP.

